NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Warm Up

1. If we INCREASE our Confidence Level, what happens to our margin of error and our interval?
2. If we INCREASE our sample size, what happens to our margin of error and our interval?
3. I have a 95% confidence interval of certain data that is (0.34, 0.46). Which of the following could be a POSSIBLE 90% confidence interval for the same data?
   1. (0.36, 0.44)
   2. (0.32, 0.48)
   3. (0.34, 0.48)
   4. (0.32, 0.46)
   5. None of the above
4. I take a sample of 1000 high school juniors and find that only 250 of them plan to take AP classes as seniors. Find a 99% confidence interval for the TRUE percent of HS juniors who plan to take AP courses. Interpret your interval.
5. I want to survey American adults about whether or not they support the war in the Middle East. I want my margin of error to be 5% with 99% confidence. How many people do I need to survey? The last time this survey was done, 54% favored the war.
6. I have an interval that is: (0.45, 0.61).
   1. What is the ?
   2. What is the margin of error?
7. I have an interval that is (0.6244, 0.7756)
   1. What is the ?
   2. What is the margin of error?
   3. Using letters (a) and (b), find the level of confidence. *Hint: find the Z\*!!!*
8. I tell you that I have a box that has 20 marbles in it. I claim that there are 20% green marbles, and the rest are black. You then take a sample of 50 (you draw out one marble, record it’s color, then replace it, shake, and re-draw, etc.). You get 20 green marbles in your sample. Do you believe my claim that there are 20% green marbles in my box?